# Vecv Introduction to Microphone

#### What is a Microphone?

- It is a type of acoustic transducer or sensor.
- Amplitude of electrical signal are proportional to the sound waves.
- A microphone, popularly called a mic or mike, is a device a transducer – that converts sound into an electrical signal.

## General terms used in Microphone

**Amplifier:** a device that tracks the amplitude of an incoming signal and proportionally increases the voltage, current or power of the signal by adding power from another source.

Capacitor microphone: an alternate, less-used term for condenser microphone.

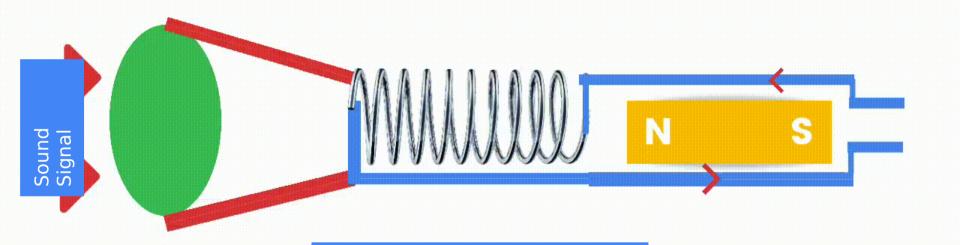
**Dynamic range:** a ratio (expressed in dBs) of the difference between the softest and the loudest sound that can be produced, reproduced or captured by a musical instrument or audio device.

#### General terms used in Microphone

**Impedance:** Measured in ohms, this is a way of expressing a circuit's opposition (resistance and reactance) to a signal or current attempting to pass through. The practical difference between impedance and resistance is that impedance changes as a function of frequency.

### **Working of Microphone**

- When you speak, sound waves created by your voice carry energy toward the microphone.
- Inside the microphone, the diaphragm (made of very thin plastic)
  moves back and forth when the sound waves hit it.
- The coil, attached to the diaphragm, moves back and forth as well.
- The permanent magnet produces a <u>magnetic field</u> that cuts through the coil. As the coil moves back and forth through the magnetic field, an <u>electric current</u> flows through it.
- The electric current flows out from the microphone to an amplifier or sound recording device.



Construction of Microphone



# The End